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D 109

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⑪ Anmelder:  
Cognis Deutschland GmbH, 40589 Düsseldorf, DE

⑫ Erfinder:  
Baumöller, Guido, 42789 Leichlingen, DE; Kawa,  
Rolf, 40789 Monheim, DE; Ansmann, Achim, Dr.,  
40889 Erkrath, DE

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Die folgenden Angaben sind den vom Anmelder eingereichten Unterlagen entnommen

Prüfungsantrag gem. § 44 PatG ist gestellt

⑭ Verwendung von Emulsionen als Imprägnier- und Avivagemittel

⑮ Vorgeschlagen wird die Verwendung von Emulsionen,

bestehend aus:

(a) Polyolpoly-12-hydroxystearate,

(b) Wachsester und

(c) Wachse

als Imprägnier- und Avivagemittel für Papiere, Vliese und Gewebe.

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L10 ANSWER 1 OF 1 WPINDEX COPYRIGHT 2001 DERWENT INFORMATION LTD

TI Use of emulsions containing polyol poly(12-hydroxystearate) esters, wax esters and waxes as impregnating and finishing agents for paper, nonwoven fabrics and woven textiles, especially tissue paper.

Script STN gestartet  
AB DE 19906081 A UPAB: 20001023

NOVELTY - Emulsions containing polyol poly(12-hydroxystearate) esters (I), wax esters and waxes are used as impregnating and finishing agents for paper, nonwoven fabrics and woven textiles.

USE - The emulsions are especially useful for improving the soft feel of tissue paper, e.g. for making toilet paper, paper handkerchiefs, facial wipes, makeup-removing tissue or kitchen roll.

ADVANTAGE - The emulsions are capable of imparting a soft feel to tissue paper with a high content (up to 95%) of recycled paper, have good penetration properties, are practically odorless and are readily biodegradable.

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PA (COGN-N) COGNIS DEUT GMBH

Partial translation of Document D 109, German *Offenlegungsschrift*. DE 199 06  
081 A 1

Page 3, line 66, to page 4, line 12:

Emulsions

In a preferred embodiment of the invention, the emulsions contain – again relative to the content of active ingredients –

- (a) ~~5 to 25, preferably 8 to 20 and particularly 10 to 15 percent by weight of polyolpoly-12-hydroxystearate,~~
- (b) ~~50 to 90, preferably 60 to 85, and particularly 70 to 80 percent by weight of wax ester, and~~
- (c) ~~5 to 25, preferably 8 to 20, and particularly 10 to 15 percent by weight of waxes;~~

~~having the requirement that the amounts add up to 100 percent by weight.~~ The active substance content of the emulsions may range from 0.5 to 80 percent by weight. At higher contents of active substance, the flowability of the emulsions greatly decreases, at lower contents no useful effect can be found. For commercial purposes, it is preferred to use concentrates having a content of active substance ranging from 10 to 70 percent by weight, which may later be diluted to application concentrations of 1 to 15 percent by weight. ~~If desired, the aqueous phase may also contain polyols, preferably up to 15 percent by weight of glycerin.~~

Page 4, lines 30 to 54:

Co-Emulsifiers

~~If desired, the preparations to be used according to the invention may also contain further emulsifiers, preferably non-ionic, cationic, or amphoteric emulsifiers, such as the following:~~

- (1) C<sub>12/18</sub> fatty acid mono and diesters of accumulation products of to 30 Mol ethylene oxide on glycerin;

- (2) Glycerin mono/diesters, sorbitan mono/diesters, and sugar mono/diesters of saturated and unsaturated fatty acids having 6 to 22 carbon atoms or hydroxycarbonic acids with two to six carbon atoms, such as for example citric acid, malic acid, or tartaric acid, and accumulation/addition products thereof;
- (3) ~~Alkylmonoglycosides and oligoglycosides~~ with 8 to 22 carbon atoms in the alkyl residue, and ethoxylated analogs thereof;
- (4) Accumulation/addition products of 15 to 60 Mol ethylene oxide on/to castor oil, and/or hardened ricinus oil;
- (5) Polyglycerin ester, such as for example polyglycerin polyricinate or polyglycerin dimerate. Likewise, mixtures of compounds of a plurality of these substance classes are suitable.
- (6) Accumulation products of 2 to 15 Mol ethylene oxide to castor oil and/or hardened castor oil;
- (7) Partial esters based on linear, branched, unsaturated and/or saturated C<sub>6/12</sub> fatty acids, castor oil, as well as 12-hydroxystearic acid, and glycerin, polyglycerin, pentaerythrite, dipentaerythrite, sugar alcohols (e.g. sorbit), alkylglucosides (e.g. methylglucoside, butylglucoside, laurylglucoside) as well as polyglucosides (e.g. cellulose);
- (8) Mono-, di-, and trialkylphosphates as well as mono-, di-, and/or tri-PEG-alkylphosphates and salts thereof;
- (9) Wool alcohols;
- (10) Polysiloxane-polyalkyl-polyether copolymers and/or corresponding derivatives;
- (11) Hybrid esters composed of pentaerythrite, fatty acids, citric acid, and fatty alcohol according to the specification in DE-11 65 574 and/or hybrid esters of fatty acids having six to 22 carbon atoms, methyl glucose and polyols, preferably glycerin or polyglycerin,
- (12) Polyalkylene glycols as well as
- (13) Glycerin carbonate.

Page 9, line 65, to page 10, line 29:

#### Claims

1. ~~Use of emulsions containing~~  
~~(a) polyolpoly-12-hydroxystearate,~~

~~(b) wax ester and~~  
~~(c) waxes~~  
as impregnators and softening agents for paper, web, and tissue.

2. Use of emulsions according to claim 1, characterized in that polyglycerin poly-12-hydroxystearate is used as component (a).
3. Use of emulsions according to claim 1 and/or claim 2, characterized in that as component (b) as wax ester of the formula (I) is used,



in which  $R^1CO$  represents a linear or branched acyl residue of six to 22 carbon atoms having 0 and/or 1 to 3 double bonds and  $R^2$  represents a linear or branched alkyl and/or alkenyl residue of six to 22 carbon atoms with the requirement that the number of carbon atoms in the ester be equal to at least 20.

4. Use of emulsions according to at least one of the claims 1 through 3, characterized in that waxes are used as component (c) which are selected from the group which is formed of
5. Use according to one of claims 1 through 4, characterized in that emulsions are used containing—relative to the active substance—
  - (a) 5 to 25 percent by weight polyolpoly-12-hydroxystearate,
  - (b) 50 to 90 percent by weight wax ester and
  - (c) 5 to 25 percent by weight waxeswith the requirement that the amounts add up to 100 percent by weight.
6. Use according to at least one of the claims 1 through 6, characterized in that emulsions are used having an active substance content in the range of 0.5 to 80 percent by weight.
7. Use according to at least one of the claims 1 through 6, characterized in that emulsions are used that contain treatment oils as auxiliary agents and additives.

8. Use according to at least one of the claims 1 through 7, characterized in that emulsions are used which contain nonionic, amphoteric, and/or cationic co-emulsifiers as auxiliary agents and additives.
9. Use according to at least one of the claims 1 through 8, characterized in that emulsions are used which contain active ingredients as auxiliary agents and additives.